

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

AMENDMENTS TO THE SPECIFICATION:

Page 1, amend paragraph [0002] as:

[0002] These days, many corporations already [[used]] use Microsoft Windows MICROSOFT WINDOWS NT (or 2000, XP) operating system as the environment of their computer file servers. However, as more and more supportive features are available to the Linux LINUX operating system, and as well as the software development cost in Linux LINUX operating system is significantly lower than those in Microsoft Windows MICROSOFT WINDOWS, some corporations started to consider switching jump-abread to the Linux LINUX operating system.

Page 1, amend paragraph [0003] as:

[0003] In fact, many corporations already [[did]] switch to the LINUX operating system. However, the two operating systems are not compatible with each other in many ways and they have different approaches and configuration files in managing their resources. As a result, the computers running in the MICORSOFT WINDOWS operating system can not access the resources running in the LINUX operating system and vice versa. The new problem that these corporations face is how to transfer is: How could they eonverse the resources from the old system to the new one successfully and effectively.[[?]]

Pages 1-2, cancel paragraphs [0004], [0005], [0006] and [0007], and replace with the following new paragraphs:

The primary object of the invention is to provide a method for transferring

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

resources between a first group of computers executing a first operating system and a second group of computers executing a second operating system. Each group of computers has at least one file server executing its respective operating system such as a **WINDOWS SERVER** (including NT, 2000, XP, and all descended server OS) operating systems or a **Linux LINUX** operating system.

According to the invention, the resources of a first file server in the first group including multiple configurations, files and directories are first transferred to a second file server in the second group. A human-computer interface control program running on the second file server in the second group is then provided for administrating the transferred resources on the second file server. The human-computer interface control program executed in the second operating system on the second file server has a user interface identical to the resource administration program executed in the first operating system to ensure the integrity of the configurations, files and directories transferred to the second file server of the second group.

In addition to files and directories, the invention also provides methods for transferring user and group information of the first file server to the second file server. After copying user and group configurations from the first file server to the second file server, commands, instructions and file sharing software in the second operating system can be used to add user and group configurations to appropriate configuration files in the second file server.

Similarly, E-mail users and accounts can also be transferred to the second file server by first copying the associated files, resources and configurations from the first file

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

server to the second file server and then running e-mail administrating software in the second file server. Furthermore, information related to hypertext transfer protocol (HTTP), server, file transfer protocol (FTP) server and other file or web servers can also be transferred.

The following embodiment and the attaching drawings provide detailed explanation to help people understand the objectives, characteristics and benefits of the invention.

Page 2, amend paragraph [0009] as:

[0009] Figure 1 shows a computer network environment ~~that the invention method applies where the method of this invention is used;~~

Page 2, amend paragraph [0011] as:

[0011] Figure 3A ~~is~~ shows a screen snapshot showing that the second file server is executing the first program;

Page 3, amend paragraph [0013] as:

[0013] Figure 4A ~~is~~ shows a screen snapshot showing that the second file server is executing the second program to administrate users;

Page 3, amend paragraph [0014] as:

[0014] Figure 4B ~~is~~ shows a screen snapshot showing that the second file server is executing the second program to administrate groups;

Page 3, amend paragraph [0015] as:

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

[0015] Figure 5A is shows a screen snapshot showing that the second file server is executing the third program and how sendmail software administrates e-mails;

Page 3, amend paragraph [0016] as:

[0016] Figure 5B is shows a screen snapshot showing that the third program sets set parameters in sendmail software;

Page 3, amend paragraph [0017] as:

[0017] Figure 6A is shows a screen snapshot showing that the second file server is executing the forth program and displays the virtual directories needed in executing FTP server software (such as “wuftp”, “proftpd”, and “vsftpd” software) in the second file server;

Page 3, amend paragraph [0018] as:

[0018] Figure 6B is shows another screen snapshot showing that the second file server is executing the forth program;

Page 3, amend paragraph [0019] as:

[0019] Figure 7A is shows a screen snapshot showing that the second file server is executing the fifth program;

Page 3, amend paragraph [0020] as:

[0020] Figure 7B is shows another screen snapshot showing that the second file server is executing the fifth program;

Page 3, amend paragraph [0021] as:

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

[0021] Figure 8 is shows a screen snapshot showing that the second file server is executing the sixth program; and

Page 3, amend paragraph [0022] as:

[0022] Figure 9 is shows a screen snapshot showing that the second file server is executing the seventh program.

Page 4, amend paragraph [0023] as:

[0023] Figure 1 shows a computer network environment in which [[that]] the method of this invention method applies is used. In Figure 1, a Local Area Network 60 links the first file server 10 executing ~~Microsoft Windows~~ MICROSOFT WINDOWS SERVER (including NT, 2000, XP, and all descended server OS) operating system, the second file server 20 executing Linux LINUX operating system and several user end (client) ~~computer~~ computers 30, 40, etc. executing ~~Microsoft Windows~~ MICROSOFT WINDOWS operating system. The user end ~~computer~~ computers 30, 40 could execute ~~Microsoft Windows~~ MICROSOFT WINDOWS operating system such as ~~Microsoft Windows~~ MICROSOFT WINDOWS 98 operating system, [[or s]] ~~Microsoft Windows~~ MICROSOFT WINDOWS MILLENNIUM Edition Windows operating system, or ~~Microsoft Windows~~ MICROSOFT WINDOWS operating system NT WORKSTATION version (or XP, 2000, and other descended OS). Under a network environment based on ~~Microsoft Windows~~ MICROSOFT WINDOWS operating system, user end ~~computer~~ computers 30, 40 could share the resources, such as files and directories, with the first file server 10 via Local Area Network 60.

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

Page 4, amend paragraph [0024] as:

[0024] However, if the user end computer 30 is switched were switching from Microsoft Windows MICROSOFT WINDOWS operating system to Linux LINUX operating system, or in another case, a new Linux LINUX based [[base]] user end computer 50 [[was]] is added to Local Area Network 60, either user end computer 30 or user end computer 50 could not share resources with the first file server 10 in these two cases.

Page 4, amend paragraph [0025] as:

[0025] The above problem would be solved if the second file server 20 could apply the invention method of this invention and transfer the shared resources from the first file server 10 to the second file server 20. So, in the two [[case]] cases mentioned above, user end computer 30 and user end computer 50 could share the transferred resources with the second file server 20 via Local Area Network 60.

Pages 4-5, amend paragraph [0026] as:

[0026] Figure 2 shows the flow chart of the invention. In step 100, the configurations, files and directories in the first file server 10 executing Windows NT WINDOWS SERVER (including NT, 2000, XP, and all descended server OS) operating system are transferred to the second file server 20 executing Linux LINUX operating system. Examples of the configurations, files and directories in the first file server 10 are Microsoft Windows NT MICROSOFT WINDOWS SERVER (including NT, 2000, XP, and all descended server OS) operating system shared files, shared directories, users,

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

groups (groups), [[,]] all information related to e-mail server software, all information related to web server software, and all information related to FTP server software, etc.

Page 5, amend paragraph [0027] as:

[0027] In step 101, the invention [[codes]] provides a Linux LINUX based human-computer interface control program, which has provides the same user interface as that in the Windows WINDOWS NT operating system, on the second file server 20 to ensure the integrity of the configurations, files, and directories transferred in step 100. The major reason that the invention provides the above interface control program is to [[make]] ensure that administrators who are familiar with Windows NT WINDOWS SERVER (including NT, 2000, XP, and all descended server OS) operating system on the first file server 10 could easily use the same Windows WINDOWS NT based human-computer interface to administrate the resources on the second file server 20.

Page 5, amend paragraph [0028] as:

[0028] The following article will explain in detail the actual steps to transfer Windows WINDOWS NT operating system configurations, files and directories from the first file server 10 to the second file server 20.

Page 5, amend paragraph [0029] as:

[0029] First, let us explain the actual steps to transfer all information related to file server software from the first file server 10 to the second file server 20. The first file server 10 executes "rmtshare.exe" instruction to get all shared directories

Serial Nr.: 09/815,833
 Art Unit: 2182

UPA-01128

under Windows NT WINDOWS SERVER (including NT, 2000, XP, and all descended server OS) operating system. Examples of the shared directories are:

Share name	Resource	Remark
<hr/>		
NETLOGON	C:\WINNT\System32\Rep\Import	
ADMIN\$	C:\WINT	
I386	C:\I386	

Page 6, amend paragraph [0030] as:

[0030] Then, execute the instruction of the shared directory name parameter in every shared directory and get the user authority configurations of the shared directories. The following example shows a possible outcome after executing "rmtshare.exe C:\I386" instruction to get and gets the "C:\I386" user authority configurations:

Share name	\spntserver\i386	
<hr/>		
Path:	C:\I386	
<hr/>		
REMARK		
LSPDOMAIN	\adam	FULL CONTROL
	\EVERYONE:	READ

Pages 6-7, amend paragraph [0031] as:

[0031] Then, execute a file sharing software such as SAMBA software in the second file server 20 and write user authority configurations to the associated configuration file

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

"smb.conf" [[file]] in SAMBA software. At last, create a default directory on the second file server 20, for example default directory "/lsproto", and then copy the shared directories and files under those shared directories on the first file server 10 to that default directory. For instance, copy the shared directories and files under those shared directories in the above example to "/lsproto" default directories. Thus, the second file server 20 will have exactly the same shared directories, the files under those shared directories [[files]] and user authority as in the first file server 10. This example explains how user end computer 50 [[60]] could share transferred resources such as "/lsproto/l386" with the second file server 20 via Local Area Network 60.

Page 7, amend paragraph [0032] as:

[0032] Second, let us explain the actual steps to transfer all information related to users and groups in the first file server 10 to the second file server 20. The following example shows a possible [[users]] user configurations after executing a user administrating command "userstat.exe" instruction in the first file server 10 and getting [[gets]] all users:

\LSPNTSERVER user account

adam Administrator Guest

Tony IUSER-LSPNTSERVER

Similar method can be used to retrieve passwords from Windows Server. By executing the command "dump.exe > smbpasswd". Then copy this smbpasswd to Linux server, and configure Linux pam module to use smbpasswd as password file.

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

Page 7, amend paragraph [0033] as:

[0033] Then, execute "useradd" instruction in the second file server 20 to add the users to the Linux LINUX operating system. For example, execute "useradd" instruction and add user "adam" in the above [[users]] user configurations to the Linux LINUX operating system. At the same time, execute "showgrps.exe" instruction in the first file server 10 and get all groups. The following example shows a possible groups group configuration:

*Account Operators *Administrators *guests

*Engineers

Page 8, amend paragraph [0035] as:

[0035] Then, write the user configurations of the groups to the files "/etc/group" of the Linux operating system on the second file server 20. "/etc/group" is designed to store groups group data. For example, write the user configurations in "Engincers" groups group to "/etc/group" files.

Page 8, amend paragraph [0036] as:

[0036] Third, let us explain the actual steps to transfer all information related to e-mail servers in the first file server 10 to the second file server 20. We will repeat the technique above to transfer the [[users]] user configurations in the first file server 10 to the second file server 20. Then, get the [[users]] user e-mail account configurations in the first file server 10. For example, get [[users]] user e-mail account "adam@x.com.tw". Then, execute a Linux LINUX based e-mail management software in the second file server 20. For example, execute the instructions in Linux LINUX's "sendmail" e-mail software to add new e-mail account and thus, add the entire [[users]] user e-mail account

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

configuration configuration in the first file server 10 to the second file server 20. For example, execute sendmail e-mail software and add [[users]] user e-mail account "adam@x.com.tw" to the second file server 20.

Page 9, amend paragraph [0037] as:

[0037] [[Forth]] Fourth, let us explain the actual steps to transfer all information related to web server software in the first file server 10 to the second file server 20. We will get all virtual directories directory configurations and their corresponding actual directories directory configurations of Windows WINDOWS NT operating system [[NT]] in the first file server 10. The following example shows a possible virtual directories after executing CSCRIPT of Windows WINDOWS NT operating system to access ADSI objects :

root

IISSAMPLES

IISADMIN

ebusiness

ecredit

Page 9, amend paragraph [0038] as:

[0038] The first three virtual directories in the above virtual directories directory example are reserved for IIS (Internet Information Service) software. The later two are virtual directories created by administrators of the first file server 10. Then, we will get individual information of every virtual directory in the first file server 10. For example, the individual information of ebusiness is [[are]] :

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

Path: c:\www\ebusiness

Default file: index.htm

browsable: False

Read: True

Write: True

Page 10, amend paragraph [0039] as:

[0039] From the individual information of virtual directory "ebusiness" in the above example, we could know information such as the corresponding actual directory is "c:\www\ebusiness" and the default file of virtual ~~directories~~ "ebusiness" ~~is~~ directory "ebusiness" is "index.htm" "index.htm" file. Then, execute a ~~Linux~~ LINUX based hypertext transfer protocol ~~procecal~~ (HTTP) (HTTP) web server software, such as "Apache" software, in the second file server 20 and write the above virtual ~~directories~~ ~~directory~~ configurations and their corresponding actual ~~directories~~ ~~directory~~ configurations to the associated configuration files "http.conf" [[file]] and "access.conf" [[file]] of the "apache" software respectively. Then, set a default directory, for example "/lsproto/wwwroot", in the second file server 20. In this case, virtual directory ebusiness will be written into "http.conf" ~~files as~~ /lsproto/wwwroot/ebusiness ~~file as~~ "/lsproto/wwwroot/ebusiness", and virtual directory ecredit will be written into "http.conf" ~~files as~~ /lsproto/wwwroot/ecredit ~~file as~~ "/lsproto/wwwroot/ecredit". At last, copy the actual directories and the files under those actual directories in the first file server 10 to the default directory. For example, copy the actual directories and the files under those actual directories of "c:\www\ebusiness" in the first file server 10 to the

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

default directory "/lsproto/wwwroot" in the second file server 20. Now, "c:\www\ebusiness" is mapped mapping to "/lsproto/wwwroot/ebusiness".

Pages 10-11, amend paragraph [0040] as:

[0040] Fifth, let us explain the actual steps to transfer all information related to FTP (File Transfer Protocol) server software in the first file server 10 to the second file server 20. Since IIS controls web server software and [[files]] FTP server software in Microsoft Windows NT MICROSOFT WINDOWS SERVER (including NT, 2000, XP, and all descended server OS) operating system, [[so]] we could reuse the above techniques to get the virtual directories directory configurations and their corresponding actual directories directory configurations of FTP server software used in the first file server 10. Then, execute a Linux LINUX based FTP software, such as "wuftp", "proftpd", or "vsftpd" software, in the second file server 20 and write the virtual directories directory configurations and their corresponding actual directories directory configurations to "/etc/ftaccess" directory and "/etc/ftphost" directory of the Linux LINUX operating system respectively. Then, set a default directory, for example "/lsproto/ftproto", in the second file server 20 and copy the actual directories and the files under those actual directories in the first file server 10 to the default directory.

Page 11, amend paragraph [0041] as:

[0041] [[Base]] Based on the invention method of this invention, the graphic interface control program in steps 101 has at least one "The First Program" a first program. The first program has a human-machine interface with the same function interface as in WINDOWS NT operating system to give instructions to directories and files in Windows

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

NT operating system. The second file server 20 can execute the first program and give instructions to directories and files transferred to the second file server 20 in step (100). Figure 3A is a screen snapshot showing shows a screen that the second file server 20 is executing the first program; and the administrator of the second file server 20 is giving instruction to the "/lsproto/lsp" directory. Figure 3B shows an example to give authority instruction in setting a user account "adamwu".

Page 11, amend paragraph [0042] as:

[0042] [[Base]] Based on the invention method of this invention, the graphic interface control program in steps 101 has at least one "The Second Program" a second program. The second program has a human-machine interface with the same function interface as in WINDOWS NT operating system to give instructions to users and groups in Windows NT operating system. The second file server 20 can execute the second program and give instructions to users and groups transferred to the second file server 20 in step (A). Figure 4A is a screen snapshot showing shows a screen that the second file server 20 is executing the second program to administrate users. Figure 4B is a screen snapshot showing shows a screen that the second file server 20 is executing the second program to administrate groups.

Page 12, amend paragraph [0043] as:

[0043] [[Base]] Based on the invention method of this invention, the graphic interface control program in steps 101 has at least one "The Third Program" a third program. The third program has a human-machine interface with the same function interface as in

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

WINDOWS NT operating system to give instructions to users and groups in Windows NT operating system. The second file server 20 can execute the third program and give instructions to e-mails administrated by a Linux LINUX based sendmail software. Figure 5A is a screen snapshot showing shows a screen that the second file server 20 is executing the third program and how sendmail software administrates e-mails. In Figure 5A, the third program gives [[give]] instructions to delete the e-mails of "adamwu@das.com.tw". Figure 5B is a screen snapshot showing shows a screen that the third program sets [[set]] parameters in sendmail software.

Page 12, amend paragraph [0044] as:

[0044] [[Base]] Based on the invention method of this invention, the graphic interface control program in steps 101 has at least one "The Forth Program" a fourth program. The forth program creates a screen with the same look as executing IIS (Internet Information Server) software in Windows NT WINDOWS SERVER (including NT, 2000, XP, and all descended server OS) operating system. The second file server 20 can execute the [[forth]] fourth program and display the virtual directories and their corresponding actual directories in the second file server 20. Figure 6A is a screen snapshot showing shows a screen that the second file server 20 is executing the [[forth]] fourth program and displays the virtual directories needed in executing FTP server software, such as "apache" software, (such as "wuftp", "proftp", or "vsftp" software) in the second file server 20. Figure 6B is [[shows]] another screen snapshot showing that the second file server 20 is executing the [[forth]] fourth program. The screen shows setting status "read" to virtual directory "home/httpd".

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

Pages 12-13, amend paragraph [0045] as:

[0045] [[Base]] Based on the invention method of this invention, the graphic interface control program in steps 101 has at least one “The Fifth Program” a fifth program. The second file server 20 can execute the fifth program, give instructions to virtual directories directory configurations and actual directories directory configurations of a FTP software, such as “wuftp”, “proftp”, or “vsftp” software, and give instructions to revoke authority to users use the FTP (file transfer protocol) software. Figure 7A is [[shows]] a screen snapshot showing that the second file server 20 is executing the fifth program. Figure 7B is [[show]] another screen snapshot showing that the second file server 20 is executing the fifth program.

Page 13, amend paragraph [0046] as:

[0046] Further more, the invention method of this invention also provides a sixth program ~~comprises coding~~ “The Sixth Program” that gives run/stop instructions on multiple server software executed in the second file server. The second file server 20 can execute the sixth program, and give run/stop instructions on server software such as e-mail server software, FTP server software, Telnet server software, Web server software, SAMBA server software, POSTGRESQL server software, and MYSQL server software, etc. Figure 8 [[shows]] is a screen snapshot showing that the second file server 20 is executing the sixth program.

Page 13, amend paragraph [0047] as:

[0047] Further more, the invention method of this invention also comprises coding

Serial Nr.: 09/815,833
Art Unit: 2182

UPA-01128

"The Seventh Program" includes a seventh program that sets multiple parameters of DHCP (Dynamic Host Configurations Protocol). The second file server 20 can execute the seventh program, write those preset multiple parameters into the associated configuration file "/etc/dhcpd.conf" [[file]] of the Linux LINUX operating system in the second file server 20, and execute DHCP software developed for Linux LINUX operating system in the second file server 20. The parameters used to set DHCP are : one subnet parameter, one network mask parameter, one starting IP address parameter, one ending IP address parameter and one user name parameter. Figure 9 is [[shows]] a screen snapshot showing that the second file server 20 is executing the seventh program.

Pages 13-14, amend paragraph [0048] as:

[0048] After all, the preferred example shown above already demonstrates, but not limits the benefit of the invention. Any one who is familiar with this technique can change or modify the invention without leaving the spirit and scope of the invention. Thus, the protection scope of the invention should be based [[base]] on the patent scope claimed in the next chapter- subject matter as defined in the appended claims.